This listing of claims replaces all prior versions of the claims in the application:

Listing of Claims:

1. (Currently amended) A variable vent valve diffuser comprising:

a conduit having at least one aperture;

an adjustable plug residing within the conduit and adapted to move relative to the at least one aperture based on a sensed parameter of operation wherein the aperture is a diffuser element forming part of the conduit, the diffuser element being variably exposed to an interior of the conduit dependent upon the position of the plug, the plug being slidably adjusted in response to first and second opposing forces acting on the plug, the first force acting on a first end of the plug and being generated by fluid pressure within the conduit, the second force acting on a second end of the plug and being generated by a spring; and

a control valve in fluid communication with the conduit, the control valve adapted to monitor fluid pressure within the conduit, and generate a third force adapted to act on the plug wherein the third force acts on the second end of the plug.

2-6. (Canceled).

7. (Currently amended) The variable vent valve diffuser of claim [[6]]1, wherein the control valve generates the third force based on a comparison between the monitored fluid pressure and a predetermined threshold.

8. (Previously presented) A method for releasing fluid pressure from a conduit, comprising:

providing a movable plug within the conduit, the plug being movable by first and second opposing forces acting on first and second opposing ends of the plug the first force being generated by a fluid pressure within the conduit, and the second force being generated by a spring;

providing an aperture in the conduit; and moving the plug relative to the aperture based on a sensed parameter of operation wherein the method further comprises identifying a pressure drop between at least two different points along the conduit and introducing a third force opposite the end exposed to fluid pressure within the conduit to adjust the position of the plug.

9-11. (Canceled).

12. (Currently amended) A fluid pressure releasing vent diffuser, comprising:

an output conduit adapted to be connected to a source of pressurized fluid to provide a primary fluid force, the output conduit being operatively connected to a pressure sensor adapted to transmit a signal representative of fluid pressure within the conduit;

a retainer guide connected to the output conduit, the retainer guide [[retainer]] having a closed end;

a diffuser element positioned within the retainer guide;

a plug slidably disposed within the retainer guide and adapted to move relative to the diffuser element;

a spring positioned between the plug and the closed end of the retainer guide to provide a spring force, the spring force biasing the plug toward a closed diffuser position and a primary fluid force biasing the plug toward an open diffuser position; and

a supplemental source of pressurized fluid in communication with the closed end of the retainer guide and acting on the plug to provide a secondary force to supplement the spring force to move the plug wherein the supplemental source of pressurized fluid is the same source of pressurized fluid connected to the output conduit and communicates through a control valve connected to the supplemental source of pressurized fluid such that the control valve is further adapted to direct fluid pressure to the closed end of the retainer guide based on the fluid pressure signal.

13-16. (Canceled).

17. (Currently amended) The fluid pressure releasing vent diffuser of claim ~~16~~12, wherein the pressure sensor includes an orifice plate in the output conduit and first and second pressure taps on opposite sides of the orifice plate.

18. (Original) The fluid pressure releasing vent diffuser of claim 17, wherein the first and second pressure taps are static pressure sensors.

19. (Original) The fluid pressure releasing vent diffuser of claim 17, wherein the control valve is a three-way control valve.

20. (Original) The fluid pressure releasing vent diffuser of claim 17, further including a relief valve between the control valve and the guide retainer, the relief valve adapted to relieve all fluid pressure from acting on a backside of the plug.

21. (Original) The fluid pressure releasing vent diffuser of claim 20, wherein the relief valve is solenoid actuated.

22-23. (Canceled).

24. (Previously presented) A variable vent diffuser, comprising:

a guide retainer adapted to be connected to an output discharging fluid pressure, the guide having at least one aperture wherein the at least one aperture is a diffuser element positioned within the guide retainer;

a movable element adapted to move within the guide and variably open and close the aperture, the movable element is a sliding plug positioned with the guide retainer and diffuser; and

means for automatically adjusting the movable element relative to the aperture based on at least one operating parameter wherein the means for automatically adjusting includes a spring biasing the plug against the discharging fluid pressure toward a closed position and further including a conduit connecting the discharging fluid to the plug and acting in concert with the spring.

25-28. (Canceled).

29. (Previously presented) The variable vent diffuser of claim 24, wherein the means for automatically adjusting further includes a control valve in the conduit connecting the discharging fluid to the plug.

30. (Original) The variable vent diffuser of claim 29, wherein the means for automatically adjusting further includes a sensor adapted to monitor an operating parameter of a machine with which the variable vent diffuser is operatively associated.

31. (Original) The variable vent diffuser of claim 30, wherein the operating parameter is fluid pressure within the output conduit, and wherein the means for automatically adjusting includes a pressure sensor adapted to transmit a signal representative of fluid pressure to the control valve.

32. (Original) The variable vent diffuser of claim 31, wherein the pressure sensor includes an orifice plate in the output conduit and first and second pressure taps on opposite sides of the orifice plate.

33. (Original) The variable vent diffuser of claim 32, wherein the pressure taps are static pressure sensors.

34. (Original) The variable vent diffuser of claim 32, wherein the control valve generates a control signal to the solenoid operating a safety valve based on a comparison of fluid pressure to a predetermined value.

35. (Original) The variable vent diffuser of claim 29, wherein the means for automatically adjusting further includes a relief valve adapted to adjust the plug to a fully open position.

36. (Canceled).